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SEARCH REQUEST FORM 5-893

Examiner # (Mandatory): 76197 Requester's Full Name: Gailene R. Gabel

Art Unit 1641 Location (Bldg/Room#): 7D16 Phone (circle) 305 306 308) 0807

Serial Number: 09/087871 Results Format Preferred (circle): PAPER DISK E-MAIL

✓ Title of Invention Automated Diagnostic System Implementing Immunoassays and Clinical Chemistry Assays Accdg to a

✓ Inventors (please provide full names): Wagner, Geral REFLEX ALGORITHM

✓ Earliest Priority Date: 6-2-98 → Cardiac markers include: citrate synthetase, myoglobin, CPK, CK Isoenzymes, LDH, LD Isoenzymes, Troponin.

Keywords (include any known synonyms registry numbers, explanation of initialisms):

Immunoassay
Immunochemistry
Clinical chemistry
aka Hematology
HemoAnalyzer

Analyzer
Instrument
Instrumentation
Diagnostic System

Biological Markers
Cardiac Markers
Cardiac Enzymes
Cardiac Profile
Coronary Profile

Multivariant Analysis 1344 1655 16.60 25 35 182.85 45
Reflex Algorithm
Reflexive Testing

CPK Isoenzymes
LDH Isoenzymes
Troponin

Search Topic:

Please write detailed statement of the search topic, and the concept of the invention. Describe as specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples of relevant citations, authors, etc., if known. You may include a copy of the abstract and the broadcast or most relevant claim(s).

Diagnostic System is used to assess cardiac patients by testing for cardiac markers: early, mid, late markers. Depending on early results, the succeeding tests will be coded by the analyzer itself (no human decision making involved), presently known clinically as reflexive testing. Please incorporate highlighted terms into keyword search also. Thanks!

Point of Contact:
Mary Hale
Technical Info. Specialist
CM1 12D16 Tel: 308-4258

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Searcher: 1/3

Searcher Phone #: Mary

Searcher Location: _____

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Date Completed: _____

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Terminal Time: 29

Number of Databases: _____

Type of Search

_____ N.A. Sequence
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_____ Structure (#)
_____ Bibliographic
_____ Litigation1
_____ Fulltext
_____ Procurement
_____ Other

Vendors (include cost where applicable)

✓ STN
_____ Questel/Orbit
_____ Lexis/Nexis
_____ WWW/Internet
_____ In-house sequence systems (list)
_____ Dialog
_____ Dr. Link
_____ Westlaw
_____ Other (specify)

PTO-1590 (2-99)

FILE 'REGISTRY' ENTERED AT 13:15:33 ON 03 JUN 1999
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G. Gabe
08/787,871

STRUCTURE FILE UPDATES: 28 MAY 99 HIGHEST RN 223764-44-1
DICTIONARY FILE UPDATES: 03 JUN 99 HIGHEST RN 223764-44-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 13, 1999

Please note that search-term pricing does apply when conducting SmartSELECT searches.

=> e citrate synthetase/cn

E1 1 CITRATE SYNTHASE I (BACILLUS SUBTILIS STRAIN 168 GENE CITA)(

performing nucleic acid amplification reactions (polymerase chain reaction, ligase chain reaction, repair chain reaction) and can be used for disease **diagnosis**. A typical app., which can be made of, e.g., glass, polystyrene, etc., consists of a flat base plate that contains a transparent surface on which the sample is placed, a hollow cylindrical structural component that can make a liq.-tight seal with the base plate and which forms a container, at least 0.5 mm high, that can hold reagents, and a cover plate. The apps., which also can be constructed to have >1 sample **processing** area, were developed as an improvement over known **devices**, esp. to increase efficiency and sensitivity and reduce nonspecific reactions. Qual. and quant. anal. may be done on both DNA and RNA samples, and the method may be **automated** easily.

=> dis his

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                    E.C.4.1.3.7)/CN
E2          1       CITRATE SYNTHASE II (BACILLUS SUBTILIS GENE CITZ)/CN
E3          1 --> CITRATE SYNTHETASE/CN
E4          1       CITRATE TRANSPORTER (HUMAN CLONE 111F11 GENE CTP)/CN
E5          1       CITRATE TRANSPORTER (KLEBSIELLA PNEUMONIAE CLONE PRS63-2
GEN
                    E CITS REDUCED)/CN
E6          1       CITRATE TRANSPORTER (SALMONELLA TYPHIMURIUM CLONE PCUT10
GEN
                    E CITA)/CN
E7          1       CITRATE TRANSPORTER PROTEIN (HUMAN CLONE 8JL-4
MITOCHONDRIA-
                    ASSOCIATED)/CN
E8          1       CITRATE TRIANION/CN
E9          1       CITRATE(3-)/CN
E10         1       CITRATE-ATP LYASE/CN
E11         1       CITRATE-PHOSPHATE-DEXTROSE MIXTURE/CN
E12         1       CITRATE-PHOSPHATE-DEXTROSE NAMED REAGENTS AND SOLUTIONS/CN

=> s e3

L1          1 "CITRATE SYNTHETASE"/CN

=> e myoglobin/cn 5

E1          1       MYOGENIN (SWINE CLONE MYOG14)/CN
E2          1       MYOGENIN (SWINE)/CN
E3          0 --> MYOGLOBIN/CN
E4          1       MYOGLOBIN (10-THREONINE) (APLYSIA LIMACINA CLONE PAPMB)/CN
E5          1       MYOGLOBIN (39-ISOLEUCINE) (HORSE HEART)/CN

=> s myoglobin?/cn

L2        133 MYOGLOBIN?/CN

=> e cpk/cn 5

E1          1       CPIPU/CN
E2          1       CPIRON/CN
E3          0 --> CPK/CN
E4          1       CPK 10/CN
E5          1       CPK 2/CN

=> s cpk?/cn

L3          3 CPK?/CN

=> e ck isoenzyme/cn 5

E1          1       CK GEL A 32/CN
E2          1       CK GEL A 4/CN
E3          0 --> CK ISOENZYME/CN
E4          1       CK-20/CN
E5          1       CK-22/CN

=> e troponin/cn 5

E1          1       TROPONEIRON TRICARBONYL/CN
E2          1       TROPONIMINE/CN
E3          0 --> TROPONIN/CN
E4          1       TROPONIN C (ANGUILLA ANGUILLA)/CN
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E5            1     TROPONIN C (ASTACUS LEPTODACTYLUS ISOFORM .ALPHA.)/CN

=> s troponin?/cn

L4          162 TROPONIN?/CN

=> e ldh/cn 5

E1            1     LDF 301/CN
E2            1     LDG 1069/CN
E3            0 --> LDH/CN
E4            1     LDI/CN
E5            1     LDI-A 200/CN

=> fil medl,caplus,biosis,embase,wpids;s (immunoassay or immunochemistry or
clinical chemis? or hematolog? or hemoanalyz? or analyzer or instrument? or
diagnos? system)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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L5       339754 FILE MEDLINE
L6       206012 FILE CAPLUS
L7       369282 FILE BIOSIS
L8       139987 FILE EMBASE
L9       112172 FILE WPIDS

TOTAL FOR ALL FILES
L10     1167207 (IMMUNOASSAY OR IMMUNOCHEMISTRY OR CLINICAL CHEMIS? OR
HEMATOLOG
                ? OR HEMOANALYZ? OR ANALYZER OR INSTRUMENT? OR DIAGNOS?
SYSTEM)

=> s (l1 or citrate synthetase or myoglobin or cpk or ck isoenzyme or ldh or
ld or isoenzyme or troponin? or l2 or l3 or l4)
<------User Break------>
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u
SEARCH ENDED BY USER
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=> s (l1 or citrate synthetase or myoglobin or cpk or ck isoenzyme or ldh or
ld or isoenzyme or troponin? or l2 or l3 or l4) and l10

L11        2023 FILE MEDLINE
L12        2252 FILE CAPLUS
L13        3053 FILE BIOSIS
L14        1465 FILE EMBASE
'CN' IS NOT A VALID FIELD CODE
L15          98 FILE WPIDS

TOTAL FOR ALL FILES
L16        8891 (L1 OR CITRATE SYNTHETASE OR MYOGLOBIN OR CPK OR CK ISOENZYME
                OR LDH OR LD OR ISOENZYME OR TROPONIN? OR L2 OR L3 OR L4) AND
                L10

=> s (multivar? analysis or reflex algorith? or reflex? test?) and l16

L17           6 FILE MEDLINE
L18           0 FILE CAPLUS
L19          58 FILE BIOSIS
L20          10 FILE EMBASE
L21           0 FILE WPIDS

TOTAL FOR ALL FILES
L22          74 (MULTIVAR? ANALYSIS OR REFLEX ALGORITH? OR REFLEX? TEST?) AND
                L16

=> s l22 and (computer program? or code or coding or sequence or network or
process?)

L23           0 FILE MEDLINE
L24           0 FILE CAPLUS
L25           0 FILE BIOSIS
L26           0 FILE EMBASE
L27           0 FILE WPIDS

TOTAL FOR ALL FILES
L28           0 L22 AND (COMPUTER PROGRAM? OR CODE OR CODING OR SEQUENCE OR
                NETWORK OR PROCESS?)

=> s l22 and computer?

L29           0 FILE MEDLINE
L30           0 FILE CAPLUS
L31           1 FILE BIOSIS
L32           1 FILE EMBASE
L33           0 FILE WPIDS

TOTAL FOR ALL FILES
L34           2 L22 AND COMPUTER?

=> dup rem l34

PROCESSING COMPLETED FOR L34
L35           2 DUP REM L34 (0 DUPLICATES REMOVED)

=> d cbib abs 1-2


L35  ANSWER 1 OF 2  EMBASE  COPYRIGHT 1999 ELSEVIER SCI. B.V.
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1998301595 EMBASE Prognostic value of prostate specific antigen before, during and after radiotherapy. Reni M.; Bolognesi A.. M. Reni, Department of Radiochemotherapy, San Raffaele Hospital, via Olgettina 60, 20132 Milan, Italy. Cancer Treatment Reviews 24/2 (91-99) 1998.
Refs: 94.
ISSN: 0305-7372. CODEN: CTREDJ. Pub. Country: United Kingdom. Language: English.

L35 ANSWER 2 OF 2 BIOSIS COPYRIGHT 1999 BIOSIS
1994:548086 Document No.: PREV199598007634. The diagnosis of ovarian tumor by stepwise discriminant analysis of multivariate. Wang, Min; Zhang; Zhongfu;
Shang; Tao; et al.. Dep. Gynecol. Obstetrics, Second Affiliated Hosp., China Med. Univ., Shenyang 110001 China. Journal of China Medical University, (1994) Vol. 23, No. 3, pp. 257-258. ISSN: 0258-4646.
Language:
Chinese. Summary Language: Chinese; English.
AB The serum contents of CEA, beta-2-MG, AFP beta-HCG, Ferritin Zn, Cu, Cu/Zn, **LDH** were determined in 50 normal women and 107 patients with ovarian tumors (benign 56, malignant 51 beford operation. The data of these 9 items measured were put into AST **computer** for discrimination by stepwise **multivariant analysis**. The accordant rate in differentiating benign from malignant ovarian tumor for inside and outside examples were 84.4% and 86.6%.

=> s l16 and (computer program? or code or coding or sequence or network or process?)

L36 199 FILE MEDLINE
L37 305 FILE CAPLUS
L38 140 FILE BIOSIS
L39 126 FILE EMBASE
L40 27 FILE WPIDS

TOTAL FOR ALL FILES
L41 797 L16 AND (COMPUTER PROGRAM? OR CODE OR CODING OR SEQUENCE OR NETWORK OR PROCESS?)

=> s l16 and computer read?

L42 0 FILE MEDLINE
L43 0 FILE CAPLUS
L44 0 FILE BIOSIS
L45 0 FILE EMBASE
L46 0 FILE WPIDS

TOTAL FOR ALL FILES
L47 0 L16 AND COMPUTER READ?

=> s l41 and (serum or plasma or whole blood)

L48 51 FILE MEDLINE
L49 59 FILE CAPLUS
L50 48 FILE BIOSIS
L51 40 FILE EMBASE
L52 7 FILE WPIDS

TOTAL FOR ALL FILES
L53 205 L41 AND (SERUM OR PLASMA OR WHOLE BLOOD)

```
=> s l53 and urine

L54           0 FILE MEDLINE
L55           6 FILE CAPLUS
L56           1 FILE BIOSIS
<------User Break------>
u
SEARCH ENDED BY USER

=> s l41 and urine

L58           3 FILE MEDLINE
L59          14 FILE CAPLUS
L60           2 FILE BIOSIS
L61           2 FILE EMBASE
L62           1 FILE WPIDS

TOTAL FOR ALL FILES
L63          22 L41 AND URINE

=> s (l53 or l63) and diagnos?

L64          15 FILE MEDLINE
L65          25 FILE CAPLUS
L66          21 FILE BIOSIS
L67          23 FILE EMBASE
L68           5 FILE WPIDS

TOTAL FOR ALL FILES
L69          89 (L53 OR L63) AND DIAGNOS?

=> s (l53 or l63) and diagnos?(l)automat?

L70           0 FILE MEDLINE
L71           2 FILE CAPLUS
L72           0 FILE BIOSIS
L73           0 FILE EMBASE
L74           1 FILE WPIDS

TOTAL FOR ALL FILES
L75           3 (L53 OR L63) AND DIAGNOS?(L) AUTOMAT?

=> s wagner g?/au,in

'IN' IS NOT A VALID FIELD CODE
L76        1357 FILE MEDLINE
L77        2073 FILE CAPLUS
L78        1702 FILE BIOSIS
'IN' IS NOT A VALID FIELD CODE
L79        1070 FILE EMBASE
L80         447 FILE WPIDS

TOTAL FOR ALL FILES
L81        6649 WAGNER G?/AU,IN

=> dup rem l75

PROCESSING COMPLETED FOR L75
L82           3 DUP REM L75 (0 DUPLICATES REMOVED)

=> d cbib abs 1-3;s l81 and l16
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L82 ANSWER 1 OF 3 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 1997-451474 [42] WPIDS
AB GB 2311614 A UPAB: 19971021
An **automatic diagnostic** apparatus (1) comprises a controller (3), sensing system (15) and output means (11, 23). The sensing system performs an assay on a sample and communicates data from the assay to the controller. This data is then **processed** and output. Also claimed are: (i) a disposable biosensor comprising a plastic sensor body with a depression leading to an outlet; apertured counter and working electrodes abutting different sides of the depression and communicating with the outlet; an **immunoassay** system in close proximity to the working electrode; and an apertured sensor inlet within the working electrode and in communication with the **immunoassay** system, both electrodes being manufactured from an electroconductive plastic; (ii) a conducting plastic electrode; (iii) a carrier for materials in a centrifuge having 2 regions such that, during spinning, a heavier component collects in one region and a lighter component collects in the other, the carrier being constructed to obstruct remixing; (iv) a disposable reagent cartridge comprising a body with reagent-containing depression(s) in it and sealed with a removable cover bearing a bar-**code** to identify the reagent and/or test requiring that reagent; and (v) a prepacked disposable **diagnostic** testing kit comprising removable cover; sample holder; biosensor; through-flow producing means; and reagent cartridge.

USE - The apparatus is especially useful for **diagnosing** and monitoring acute myocardial infarction by monitoring ex vivo levels of cardiac marker proteins such as CK, CK-MM, CK-MB, **myoglobin**, cardiac myosin light chain(s), **Troponin** T and/or **Troponin** I by electrochemical **immunoassay** (claimed), and can be used to monitor reperfusion. The carrier is used in a centrifuge to separate a patient's sample into its constituent components, e.g. to separate red blood cells from **plasma**. Use of the **diagnostic** kit involves placing the sample in the sample holder, fitting the biosensor to the through-flow producing means, and then placing the sample holder, biosensor and reagent cartridge in the appropriate place in the apparatus. The apparatus senses when all the components have been correctly placed within the apparatus and then carries out the assay.

ADVANTAGE - The biosensor is made from relatively inexpensive materials and so can be disposed of after use, removing the need for time-consuming cleaning. In the sample carrier, the lighter separated material may be easily withdrawn with significantly reduced risk of accidental contamination by the heavier material. The reagent cartridge saves time and reduces errors in preparing the reagents.
Dwg.1/15

L82 ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS
1994:479972 Document No. 121:79972 **Serum troponin** T as a biochemical marker of ischemic myocardial injury. Zaninotto, M.; Secchiero, S.; Rubin, D.; Mussap, M.; Accorsi, F.; Cocco, C.; Burlina, A. (Ist. di Med. di Lab., Univ. degli Stud., Padua, Italy). Eur. J. Lab. Med., 1(2), 79-85 (English) 1993. CODEN: EJLAEW.
AB **Troponin** T is a structurally bound protein of the striated muscle cells; the different amino acid **sequence** of the protein obsd. in cardiac and skeletal muscles makes it possible to raise antisera against cardiac **troponin** T. A new **automated** enzyme **immunoassay** with cardiospecific monoclonal antibodies was used to

detect cardiac circulating **troponin** T in samples from 40 patients (group 1) with acute myocardial infarction (AMI), monitored serially for 5 days after admission, 33 of whom were on thrombolytic treatment, and from 30 non-AMI patients (group 2), 8 of whom had non-ischemic chest pain, 7 non-ischemic cardiopathy, 10 multiple trauma without chest contusion and 5 skeletal muscle injuries. Values for **troponin** T were compared with those for creatine kinase, MB **isoenzyme** (activity and mass concn.), **myoglobin** and lactate dehydrogenase. **Troponin** T sensitivity in detecting myocardial infarction is 1.0 from 8 h to 126 h after the onset of chest pain, and the specificity is 0.96. The time of "**diagnostic** window" of this protein is significantly wider than that obsd. with the other parameters considered. Reperfusion of the infarct-related artery influences the release of **troponin** T into **plasma**, with a statistically significant difference between the peak values (p=0.0364) and time to peak values (p=0.0001) of patients with reperfused and those of patients with non-reperfused myocardial infarction. Cardiac **troponin** T measurement is a substantial advance in the lab. **diagnosis** of acute myocardial infarction and in its monitoring.

L82 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS
1993:120105 Document No. 118:120105 Preliminary evaluation of an experimental **clinical chemistry analyzer** developed for space medicine. Wu, Alan H. B.; Gornet, Terrie G.; Schenkel, Olivir; Smith-Cronin, Lynn; Graham, Gary A.; Tonnesen, Alan S.; McKinley, Bruce A. (Med. Sch., Univ. Texas, Houston, TX, 77030, USA). Clin. Chem. (Washington, D. C.), 39(1), 37-44 (English) 1993. CODEN: CLCHAU. ISSN: 0009-9147.

AB An exptl. **clin. chem. analyzer** system was designed and built to demonstrate the feasibility of **clin. chem.** as part of a medical-care system at NASA's planned space station Freedom. This is a report of the performance of the exptl. **analyzer**, called a medical development unit (MDU), for selected analytes in a lab. setting in prepn. for a preliminary clin. trial at patients' bedsides in an intensive-care unit. Within-run CVs ranged from 0.7% for sodium to 7.1% for phosphorus; day-to-day CVs ranged from 1.0% for chloride to 23.4% for calcium. Correlation of patients' blood sample analyses compared well with those by Ektachem E700 and other high-vol. central lab. **analyzers** (r ranged from 0.933 for creatine kinase MB **isoenzyme** to 0.997 for potassium), except for Hb (r = 0.901) and calcium (r = 0.823). Although several CVs obtained in this study exceeded theor. desired precision limits based on biol. variations, performance was adequate for clin. lab. **diagnosis**. The effect of potentially interfering concns. of Hb, bilirubin, and lipids was examd.: the only effect was neg. interference with calcium analyses by high concns. of bilirubin. The effects of preanal. variables and the performance of exptl. sample-transfer cups designed to retain sample and ref. liq. in microgravity were also examd. Continued development of the MDU system is recommended, esp. **automation** of sample **processing**.

L83	2	FILE MEDLINE
L84	0	FILE CAPLUS
L85	6	FILE BIOSIS
L86	1	FILE EMBASE
L87	0	FILE WPIDS

TOTAL FOR ALL FILES
L88 9 L81 AND L16

=> dup rem l88

PROCESSING COMPLETED FOR L88
L89 7 DUP REM L88 (2 DUPLICATES REMOVED)

=> d 1-7 cbib abs

L89 ANSWER 1 OF 7 MEDLINE DUPLICATE 1
1999032324 Document Number: 99032324. Implementation of a computerized cardiovascular information system in a private hospital setting [see comments]. Taylor G S; Muhlestein J B; **Wagner G S**; Bair T L; Li P; Anderson J L. (Department of Medicine, University of Utah, LDS Hospital, Salt Lake City 84143, USA.)AMERICAN HEART JOURNAL, (1998 Nov) 136 (5) 792-803. Journal code: 3BW. ISSN: 0002-8703. Pub. country: United States. Language: English.
AB BACKGROUND: The use of clinical databases improves quality of care, reduces operating costs, helps secure managed care contracts, and assists in clinical research. Because of the large physician input required to maintain these systems, private institutions have often found them difficult to implement. At **LDS** Hospital in Salt Lake City, Utah, we developed a cardiovascular information system (**LDS**-CIS) patterned after the Duke University Cardiovascular Database and designed for ease of use in a private hospital setting. METHODS: Features of the **LDS**-CIS include concise single-page report forms, a relational database engine that is easily queried, automatic generation of final procedure reports, and merging of all data with the hospital's existing information system. So far, data from more than 14,000 patients have been entered. RESULTS: **LDS**-CIS provides access to data for research to improve patient care. For example, by using data generated by **LDS**-CIS, the policy requiring surgical backup during percutaneous transluminal coronary angioplasty was eliminated, resulting in no increased patient risk while saving nearly $1 million in 1 year. **LDS**-CIS generates physician feedback reports documenting performance compared with peers. This physician self-evaluation has standardized and improved care. Information from **LDS**-CIS has been **instrumental** in securing and maintaining managed care contracts. **LDS**-CIS risk analysis provides physicians with outcomes data specific to their current patient's demographics and level of disease to assist in point of care decisions. CONCLUSION: The use of **LDS**-CIS in the routine operations of **LDS** Hospital heart services has been found to be feasible, beneficial, and cost-effective.

L89 ANSWER 2 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
1996:534619 Document No.: PREV199699256975. Cardiac **troponin** T levels for risk stratification in acute myocardial ischemia. Ohman, E. Magnus (1); Armstrong, Paul W.; Christenson, Robert H.; Granger, Christopher B.; Katus, Hugo A.; Hamm, Christian W.; O'Hanesian, Mary Ann; **Wagner, Galen S.**; Kleiman, Neal S.; Harrell., Frank E., Jr.; Califf, Robert M.; Topol, Eric J.. (1) Box 3151, Duke Univ. Med. Cent., Durham, NC 27710 USA. New England Journal of Medicine, (1996) Vol. 335, No. 18, pp. 1333-1341. ISSN: 0028-4793. Language: English.
AB Background: The prognosis of patients hospitalized with acute myocardial ischemia is quite variable. We examined the value of serum levels of cardiac **troponin** T, serum creatine kinase MB (CK-MB) levels, and electrocardiographic abnormalities for risk stratification in patients with acute myocardial ischemia. Methods: We studied 855 patients within 12 hours of the onset of symptoms. Cardiac **troponin** T levels, CK-MB levels, and electrocardiograms were analyzed in a blinded fashion at the

core laboratory. We used logistic regression to assess the usefulness of baseline levels of cardiac **troponin** T and CK-MB and the electrocardiographic category assigned at admission - ST-segment elevation, ST-segment depression, T-wave inversion, or the presence of confounding factors that impair the detection of ischemia (bundle-branch block and paced rhythms) - in predicting outcome. Results: On admission, 289 of 801 patients with base-line serum samples had elevated **troponin** T levels (gt 0.1 ng per milliliter). Mortality within 30 days was significantly higher in these patients than in patients with lower levels of **troponin** T (11.8 percent vs. 3.9 percent, P lt 0.001). The **troponin** T level was the variable most strongly related to 30-day mortality (chi-square = 21, P lt 0.001), followed by the electrocardiographic category (chi-square = 14, P = 0.003) and the CK-MB level (chi-square = 11, P = 0.004). **Troponin** T levels remained significantly predictive of 30-day mortality in a model that contained the electrocardiographic categories and CK-MB levels (chi-square = 9.2, P = 0.027). Conclusions: The cardiac **troponin** T level is a powerful, independent risk marker in patients who present with acute myocardial ischemia. It allows further stratification of risk when combined with standard measures such as electrocardiography and the CK-MB level.

L89 ANSWER 3 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS

1996:264058 Document No.: PREV199698820187. Serum **myoglobin** for the early non-invasive detection of coronary reperfusion in patients with acute myocardial infarction. Jurlander, B.; Clemmensen, P.; Ohman, E. Magnus; Christenson, R.; **Wagner, G. S.**; Grande, P. (1). (1) Heart Cent. Rigshosp., Natl. Univ. Hosp., Blegdamsvej 9, DK-2100 Copenhagen Denmark. European Heart Journal, (1996) Vol. 17, No. 3, pp. 399-406. ISSN: 0195-668X. Language: English.

AB The ideal non-invasive method for detecting coronary reperfusion has not yet been established. In 63 patients with acute myocardial infarction, serum **myoglobin** and creatine kinase-MB were measured every 15 min. Thrombolytic treatment was given (n=52) and acute coronary angiography showed a patent infarct-related artery in 49 patients while 14 patients had no coronary reperfusion. Median time to peak serum **myoglobin** was shorter (reperfusion group 178 min vs no reperfusion group 480 min, P lt 0.0001) than time to peak serum creatine kinase-MB (reperfusion group 550 min vs no reperfusion group 1080 min, P lt 0.0001), P lt 0.0001. **Myoglobin** appearance rate, calculated as the concentration at 2 h divided by baseline values (Mb-2/Mb-0) was highest in the reperfusion group (4.0 vs 1.6), P lt 0.001. An earlier proposed index, Mb-2/Mb-0 gt 2.4 for identification of reperfusion 2 h after thrombolytic therapy, showed predictive values of positive and negative tests of 0.94 and 0.44, respectively, Combining this index with signs of medium to larger infarct size (Mb-2 gt 200 mu-g cntdot l-1) increased the predictive value of the negative test to 1.00. In patients with signs of minor infarcts (Mb-2 lt 200 mu-g cntdot l-1) the predictive values of positive and negative tests were 0.94 and 0.79, respectively, 5 h after onset of thrombolytic therapy. An early rise and a peak in serum **myoglobin** values seems to be a reliable and simple non-invasive indicator of successful and unsuccessful reperfusion therapy.

L89 ANSWER 4 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS

1996:13590 Document No.: PREV199698585725. **Myoglobin** kinetics in

serum are correlated to the rate of resolution of the ST-segment deviation
in AMI patients. Jurlander, Birgit; Clemmensen, Peter; Host, Nis; Galatius-Jensen, Soren; Krucoff, Mitchell W.; **Wagner, Galen S.**; Grande, Peer. Heart Cent., Rigshospitalet, National Univ. Hosp., Hillerod Sygehus, Copenhagen Denmark. Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I679. Meeting Info.: 68th Scientific Session of the American Heart Association Anaheim, California, USA November 13-16, 1995 ISSN: 0009-7322.
Language: English.

L89 ANSWER 5 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
1995:145107 Document No.: PREV199598159407. Diagnostic Ability of a Single Admission Value of Serum **Myoglobin, Troponin**-T and CK-MB in Acute Myocardial Infarction Patients. Jurlander, Birgit (1); Clemmensen, Peter; Galatius-Jensen, Soren; **Wagner, Galen S.**; Grande, Peer. (1) Dep. Med. B, Rigshosp., Hillerod Sygehus, Univ. Copenhagen, Copenhagen Denmark. Journal of the American College of Cardiology, (1995) Vol. 0, No. SPEC. ISSUE, pp. 248A. Meeting Info.: 44th Annual Scientific Session of the American College of Cardiology New Orleans, Louisiana, USA March 19-22, 1995 ISSN: 0735-1097. Language: English.

L89 ANSWER 6 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
1996:8093 Document No.: PREV199698580228. Changes in serum **myoglobin** mirror ECG ST-segment shifts in patients with acute myocardial ischaemia. Jurlander, B. (1); Clemmensen, P.; Host, N.; Galatius-Jensen, S.; Drucoff,
M. W.; **Wagner, G. S.**; Grande, P.. (1) Heart Cent., Natl. Univ. Hosp., Copenhagen Denmark. European Heart Journal, (1995) Vol. 16, No. ABSTR. SUPPL., pp. 41. Meeting Info.: XVIIth Congress of the European Society of Cardiology Amsterdam, Netherlands August 20-24, 1995 ISSN: 0195-668X. Language: English.

L89 ANSWER 7 OF 7 MEDLINE
90352781 Document Number: 90352781. Relative increase in creatine kinase MB **isoenzyme** during reperfusion after myocardial infarction is method dependent. Christenson R H; Clemmensen P; Ohman E M; Toffaletti J; Silverman L M; Grande P; Vollmer R T; **Wagner G S.** (Department of Laboratory Service, Durham Veterans Administration Medical Center, NC 27705..)CLINICAL CHEMISTRY, (1990 Aug) 36 (8 Pt 1) 1444-9. Journal code:
DBZ. ISSN: 0009-9147. Pub. country: United States. Language: English.
AB We compared relative increases in creatine kinase (EC 2.7.3.2) MB **isoenzyme** (CK-MB) after reperfusion in myocardial infarction for four popular methods: electrophoresis, immunoinhibition, the "Magic Lite" (Ciba-Corning) system, and the Stratus (Dade). In a method comparison study, we confirmed that all four methods correlated (r greater than 0.95). Electrophoresis demonstrated the greatest scatter about the regression line, immunoinhibition the least. For CK-MB quantities near each method's "positive cutoff" indicating myocardial infarction, results by all methods agreed in 95% of samples. To characterize relative increases in CK-MB, we computer-fitted data obtained from each method for serial specimens collected from six acute myocardial infarction patients during myocardial reperfusion. Although for each individual patient the four methods appeared to exhibit parallelism, the methods differed significantly in terms describing their appearance rate, peak-time & fall-off, and time-to-peak activity. Consistent with these data, we found that the relative CK-MB increases at various times after reperfusion, compared with baseline concentrations, are method-dependent. Therefore, when using CK-MB for indicating coronary patency, one must develop

specific limits for each method utilized.

=> s automat?(1)diagnos? and (cardiac or myocardi?)

L90 360 FILE MEDLINE
L91 44 FILE CAPLUS
L92 261 FILE BIOSIS
L93 297 FILE EMBASE
L94 50 FILE WPIDS

TOTAL FOR ALL FILES
L95 1012 AUTOMAT?(L) DIAGNOS? AND (CARDIAC OR MYOCARDI?)

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L96 106 FILE MEDLINE
L97 5 FILE CAPLUS
L98 37 FILE BIOSIS
L99 70 FILE EMBASE
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L101 238 L95 AND (COMPUTER(W)(READ? OR PROGRAM?) OR CODE OR CODING OR SEQUENCE OR NETWORK OR PROCESS?)

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L102 0 FILE MEDLINE
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L108 0 FILE MEDLINE
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L113 1 (IMMUNOASSAY OR CLIN? CHEM?) AND DEVICE? AND L101

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L113 ANSWER 1 OF 1 CAPLUS COPYRIGHT 1999 ACS
1995:888100 Document No. 123:280286 **Device** for **processing** nucleic acids in various preparations. Kandolf, Reinhard (Boehringer Mannheim GmbH, Germany). Eur. Pat. Appl. EP 673679 A1 19950927, 14 pp. DESIGNATED STATES: R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL. (German). CODEN: EPXXDW. APPLICATION: EP 95-103907 19950317. PRIORITY: DE 94-4409705 19940322.

AB Apps. and methods are disclosed for **processing** nucleic acids in nucleic acid-contg. samples such as histol. tissue sections, cytospin prepns., chromosome prepns., etc. The apps. are esp. suitable for